CLAIMS

Sub A6

1. A thin film transistor including on the surface side of a substrate a channel region opposed to a gate electrode, with a gate insulating film provided therebetween, and a source-drain region connected to said channel region, and a thin film transistor having a source-drain wiring layer electrically connected to said source-drain region, and a gate wiring layer electrically connected to said gate electrode,

in which at least one component part composed of a conductive film or a semiconductor film, among the component parts of each thin film transistor, is provided with a heat-radiating extension.

2. Thin film transistors according to Claim 1, wherein said heat-radiating extension is a portion extending from said gate electrode at both sides.

3. Thin film transistors according to Claim 2, wherein the extending portion of said gate electrode is provided on at least one end of said gate electrode.

4. Thin film transistors according to Claim 3, wherein said gate wiring layer is electrically connected to the extending portion of said gate electrode by a plurality of contact holes.

5. Thin film transistors according to Claim 2, wherein

the extending portion of said gate electrode is provided in a region where the extending portion of said gate electrode is superimposed to said channel region.

6. Thin film transistors according to Claim 5, wherein the extending portion of said gate electrode is provided at a location corresponding to an approximately central region of the width of said channel region.

7. Thin film transistors according to Claim 1, wherein said heat-radiating extension is a portion extending from said channel region to both sides.

8. Thin film transistors according to Claim 7, wherein the extending portion of said channel region is provided in a region superimposed to said gate electrode.

9. Thin film transistors according to Claim 7, wherein said heat-radiating extension is a portion extending from said source-drain region to at both sides.

10. Thin film transistors according to Claim 9, wherein said source-drain wiring layer is electrically connected to the extending portion of said source-drain region by a plurality of contact holes.

11. Thin film transistors according to Claim 1, wherein said heat-radiating extension is an extending portion extended from said source-drain region at both sides so

that, in a CMOS inverter circuit including said thin film transistors, which are an inversely conductive type, the adjacent source-drain regions of said thin film transistors are connected between CMOS circuits.

12. Thin film transistors according to Claim 11, wherein said heat-radiating extension is provided with conductivity by using an impurity identical to the impurity of said source-drain region to which said extension itself is connected.

13. Thin film transistors according to Claim 11 or 12, wherein said heat-radiating extension is formed in a region superimposed to said source-drain wiring layer for connecting the adjacent source-drain regions of said thin film transistors between the CMOS circuits.

14. Thin film transistors according to Claim 1, wherein said heat-radiating extension is an extending portion from at least either of said source-drain wiring layer and said gate wiring layer at both sides.

15. A liquid crystal display device using an active matrix substrate on which a driving circuit including a thin film transistor as defined in any of Claims 1 to 14 is formed.

16. An electronic apparatus in which a liquid crystal display device as defined in Claim 15 is used.

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